

NO. 138

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name Barclay E.  
Joint Welding Procedure GTAW  
Part number and Job number D350 626 02 / B34 223

TEST WELDS REQUIRED

BASE METAL Aluminum  
Penetration Complete ☐ Partial ☒  
Current AC ☒ DC ☐ WELDING PROCESS TIG  
Single Weld ☒ Double Weld ☐  
Backing YES ☐ NO ☒

	Position		Vertical Down <input type="checkbox"/> Up <input type="checkbox"/>	
Sheet Groove	1G <input type="checkbox"/>	2G <input type="checkbox"/>	3G <input type="checkbox"/>	4G <input type="checkbox"/>
Tube Groove	1G <input type="checkbox"/>	2G <input type="checkbox"/>	5G <input type="checkbox"/>	6G <input type="checkbox"/>
Sheet Fillet	1F <input type="checkbox"/>	2F <input type="checkbox"/>	3F <input type="checkbox"/>	4F <input type="checkbox"/>
Tube Fillet	1F <input type="checkbox"/>	2F <input type="checkbox"/>	4F <input type="checkbox"/>	5F <input type="checkbox"/>

Crossbolt Spacer Welded into Skic tube

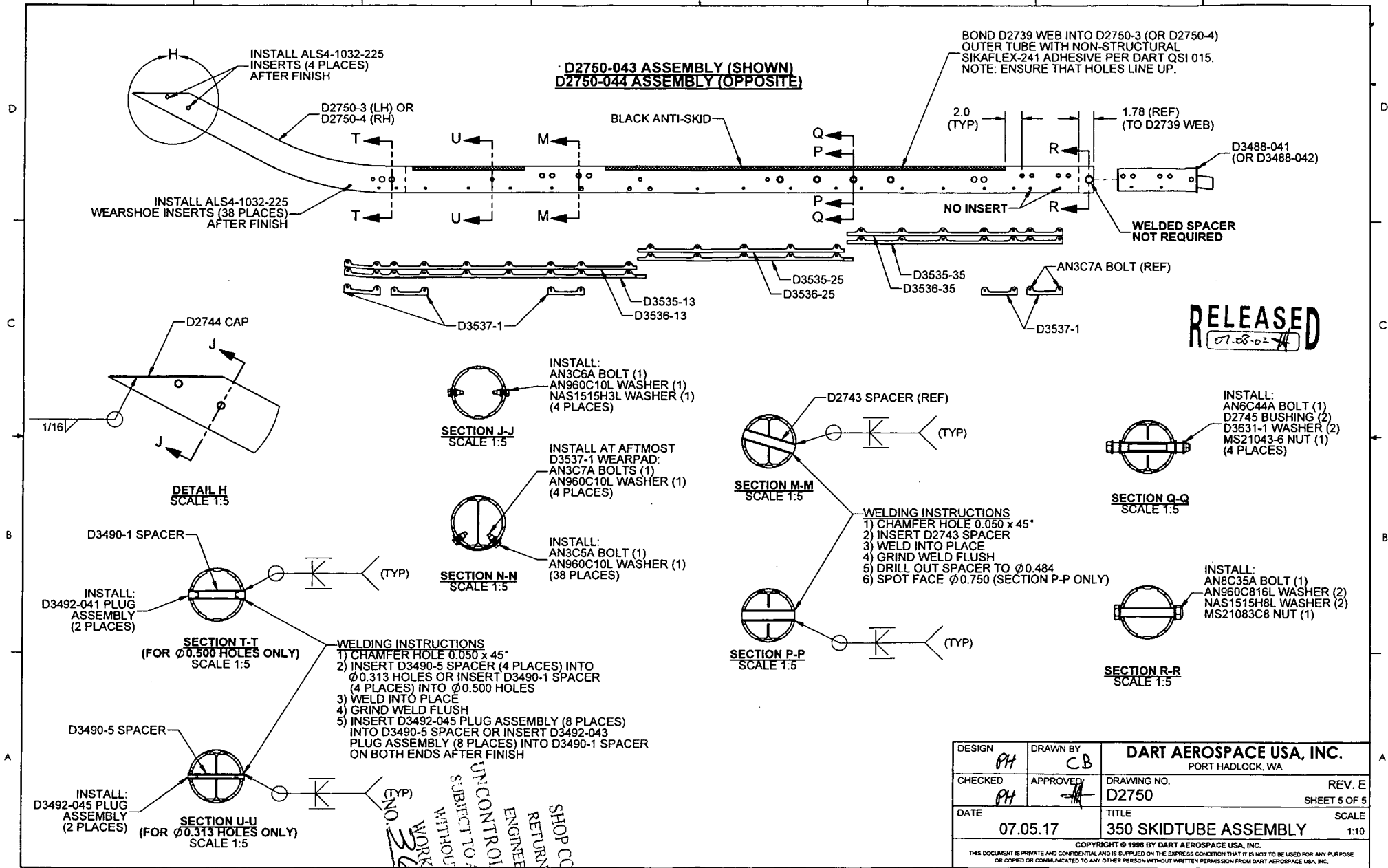
TEST RESULTS

Visual Pass ☒ Fail ☐  
Penetration Pass ☒ Fail ☐  
Crossbolt Spacer Pass ☒ Fail ☐

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

Date of Test Coupon ~~08-03-06~~ Qualifier Pet. Duval  
08-01-06

8 7 6 5 4 3 2 1



RELEASED  
 07-08-02

SHOP COPY  
 RETURN TO  
 ENGINEERING  
 UNCONTROLLED COPY  
 SUBJECT TO AMENDMENT  
 WITHOUT NOTICE  
 WORK ORDER  
 ENO 36224

DESIGN PH	DRAWN BY CB	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED PH	APPROVED [Signature]	DRAWING NO. D2750	REV. E SHEET 5 OF 5
DATE 07.05.17	TITLE 350 SKIDTUBE ASSEMBLY		SCALE 1:10
COPYRIGHT © 1996 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.			

INSTALL ALS4-1032-225  
INSERTS (4 PLACES)  
AFTER FINISH

D2750-1 (LH) OR  
D2750-2 (RH)

INSTALL ALS4-1032-225  
WEARSHOE INSERTS (38 PLACES)  
AFTER FINISH

**D2750-041 ASSEMBLY (SHOWN)  
D2750-042 ASSEMBLY (OPPOSITE)**

BLACK ANTI-SKID

BOND D2739 WEB INTO D2750-1 (OR D2750-2)  
OUTER TUBE WITH NON-STRUCTURAL  
SIKAFLEX-241 ADHESIVE PER DART QSI 015.  
NOTE: ENSURE THAT HOLES LINE UP.

2.0  
(TYP)

1.78 (REF)  
(TO D2739 WEB)

D3488-041  
(OR D3488-042)

NO INSERT

WELDED SPACER  
NOT REQUIRED

D3535-35  
D3536-35

AN3C7A BOLT (REF)

D3537-1

D3535-13  
D3536-13

D3537-1

**RELEASED**  
07.05.02

D2744 CAP

J

**DETAIL H  
SCALE 1:5**

1/16

**SECTION J-J  
SCALE 1:5**

INSTALL:  
AN3C6A BOLT (1)  
AN960C10L WASHER (1)  
NAS1515H3L WASHER (1)  
(4 PLACES)

INSTALL AT AFTMOST  
D3537-1 WEARPAD:  
AN3C7A BOLTS (1)  
AN960C10L WASHER (1)  
(4 PLACES)

SECTION N-N  
SCALE 1:5

INSTALL:  
AN3C5A BOLT (1)  
AN960C10L WASHER (1)  
(38 PLACES)

**SECTION M-M  
SCALE 1:5**

D2743 SPACER (REF)  
(TYP)

**SECTION P-P  
SCALE 1:5**

(TYP)

**SECTION Q-Q  
SCALE 1:5**

INSTALL:  
AN6C44A BOLT (1)  
D2745 BUSHING (2)  
D3631-1 WASHER (2)  
MS21043-6 NUT (1)  
(4 PLACES)

**SECTION R-R  
SCALE 1:5**

INSTALL:  
AN8C35A BOLT (1)  
AN960C816L WASHER (2)  
NAS1515H8L WASHER (2)  
MS21083C8 NUT (1)

**WELDING INSTRUCTIONS**  
1) CHAMFER HOLE 0.050 x 45°  
2) INSERT D3490-1 SPACER (4 PLACES) INTO  
Ø 0.500 HOLES OR INSERT D3490-3 SPACER  
(4 PLACES) INTO Ø 0.750 HOLES  
3) WELD INTO PLACE  
4) GRIND WELD FLUSH  
5) INSERT D3492-041 PLUG ASSEMBLY (8 PLACES)  
INTO D3490-1 SPACER OR INSERT D3492-043  
PLUG ASSEMBLY (8 PLACES) INTO D3490-3 SPACER  
ON BOTH ENDS AFTER FINISH

**SECTION K-K  
(FOR Ø 0.750 HOLES ONLY)  
SCALE 1:5**


D3490-3 SPACER

INSTALL:  
D3492-043 PLUG  
ASSEMBLY  
(2 PLACES)

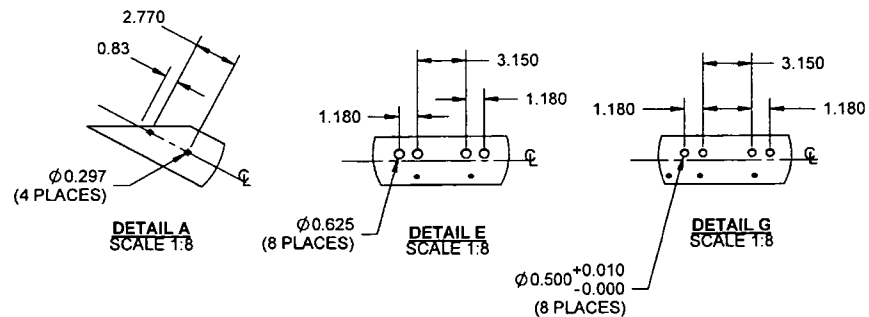
D3490-1 SPACER

INSTALL:  
D3492-041 PLUG  
ASSEMBLY  
(2 PLACES)

**SECTION L-L  
(FOR Ø 0.500 HOLES ONLY)  
SCALE 1:5**

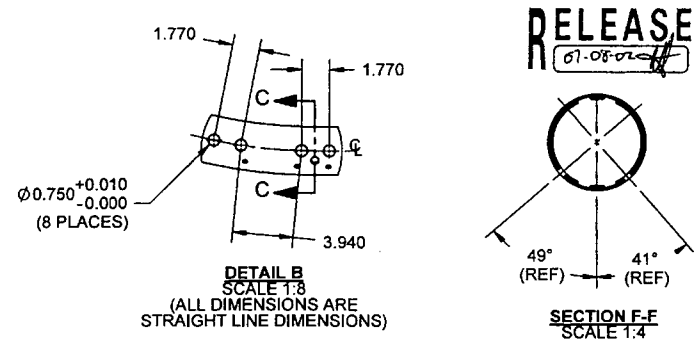
DESIGN <b>PH</b>	DRAWN BY <b>CB</b>	<b>DART AEROSPACE USA, INC.</b> PORT HADLOCK, WA	
CHECKED <b>PH</b>	APPROVED 	DRAWING NO. <b>D2750</b>	REV. E SHEET 4 OF 5
DATE <b>07.05.17</b>	TITLE <b>350 SKIDTUBE ASSEMBLY</b>		SCALE 1:10
COPYRIGHT © 1996 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.			

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO ATTENDANT  
WITHOUT NOTICE  
WORK ORDER  
30224



SECTION C-C  
SCALE 1:4

SECTION D-D  
SCALE 1:4



DESIGN PH	DRAWN BY CB	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED PH	APPROVED [Signature]	DRAWING NO. D2750	REV. E SHEET 3 OF 5
DATE 07.05.17		TITLE 350 SKIDTUBE ASSEMBLY	SCALE 1:20
COPYRIGHT © 1996 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.			

1.125  
SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 36224



DESIGN <i>PH</i>	DRAWN BY <i>CB</i>	<b>DART AEROSPACE USA, INC.</b> PORT HADLOCK, WA	
CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D2750</b>	REV. E SHEET 2 OF 5
DATE <b>07.05.17</b>		TITLE <b>350 SKIDTUBE ASSEMBLY</b>	SCALE NTS

GENERAL NOTES:

**RELEASED**  
*07-08-02 [Signature]*

1. ALL DIMENSIONS ARE IN INCHES.
2. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
3. MAKE FROM D2600-3 EXTRUSION (INITIAL LENGTH = 120.0).
4. DAMAGE TOLERANCE ON BENDING:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 12 INCHES ABOVE THE GROUND. NO GOUGING IS ACCEPTABLE IN THE FLAT PORTION OF THE TUBE. GOUGES UP TO 0.020 ARE ACCEPTABLE IN THE BENT PORTION OF THE TUBE. TUBE O.D. SHOULD BE  $3.150 \pm 0.010$  IN THE FLAT PORTION OF THE TUBE. TUBE O.D. SHOULD BE  $3.15 \pm 0.030$  IN THE BENT PORTION OF THE TUBE.
5. ALL HOLES DRILLED ON CENTERLINES EXCEPT THOSE NOTED BY SECTIONS C-C, D-D AND F-F.
6. WELDING TO BE DONE PER DART QSI 004.
7. FINAL CONFIGURATION SHOULD HAVE THE FOLLOWING MINIMUM MECHANICAL PROPERTIES:  
MINIMUM YIELD TENSILE STRENGTH = 35 ksi  
MINIMUM ULTIMATE TENSILE STRENGTH = 38 ksi
8. FINISH:  
ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1 PRIOR TO INSTALLING D2739 WEB.  
POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3  
BLACK ANTI-SKID PAINT AS INDICATED TO 1.0 ABOVE SKIDTUBE CENTER-LINE PER DART 005 4.4 (OPTIONAL).
9. INSTALL ALS4-1032-225 INSERTS AFTER FINISH AS INDICATED IN D2750-1/-2/-3/-4 WELDING DETAIL ON PAGE 4 AND 5. DRILL 'F' SIZE HOLES ( $\emptyset 0.297$ ) FOR WEARSHOE INSERTS.
10. D3488-041 (OR D3488-042) BLADE FITTING AND AN3C5A/AN3C7A WEARSHOE BOLTS TO BE INSTALLED USING SIKAFLEX-241 (OR EQUIVALENT) SEALANT.
11. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND AFTER INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS POWDER COATING WITH MEK DEGREASER.

SHOP COPY  
RETURN TO  
ENGINEERING  
UNLESS OFF  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. **36224**

**COPYRIGHT © 1998 BY DART AEROSPACE USA, INC.**

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.



DESIGN <i>PH</i>	DRAWN BY <i>CB</i>	<b>DART AEROSPACE USA, INC.</b> PORT HADLOCK, WA	
CHECKED <i>PH</i>	APPROVED <i>[Signature]</i>	DRAWING NO. <b>D2750</b>	REV. E SHEET 1 OF 5
DATE <b>07.05.17</b>		TITLE <b>350 SKIDTUBE ASSEMBLY</b> SCALE NTS	
REV	DATE	DESCRIPTION	
A	98.04.16	NEW ISSUE	
B	98.09.01	CHANGE MS24694-S293 TO AN8-16A	
C	98.11.18	ADD D2750-3 / D2750-4; INCORPORATE D2738 AND D2740	
D	06.01.05	ADD HOLES AND SPACERS FOR APICAL FLOATS INCORPORATE DEO 9133 / 9157	
E	07.05.17	CHANGE TO STAINLESS STEEL WEARPLATES; ADD RUBBER GASKETS; CHANGE INSERTS; ADD D3631-1; REMOVE QTY(38) NAS1515H3L; REMOVE QTY(10) NAS1515H8L; REMOVE D2741, QTY(2) AN960C816; REMOVE QTY(2) MS21083C8	

RELEASED  
07.08.02 *[Signature]*

Qty -041	Qty -042	Qty -043	Qty -044	Part Number	Description
X				D2750-041	SKIDTUBE ASSEMBLY, LH
	X			D2750-042	SKIDTUBE ASSEMBLY, RH
		X		D2750-043	SKIDTUBE ASSEMBLY, LH
			X	D2750-044	SKIDTUBE ASSEMBLY, RH
1	1	1	1	D2739	WEB
8	8	8	8	D2743	SPACER
1	1	1	1	D2744	CAP
8	8	8	8	D2745	BUSHING
1				D2750-1	SKIDTUBE WELDMENT, LH
	1			D2750-2	SKIDTUBE WELDMENT, RH
		1		D2750-3	SKIDTUBE WELDMENT, LH
			1	D2750-4	SKIDTUBE WELDMENT, RH
1		1		D3488-041	BLADE FITTING, LH
	1		1	D3488-042	BLADE FITTING, RH
4	4	4	4	D3490-1	SPACER
4	4			D3490-3	SPACER
		4	4	D3490-5	SPACER
8	8	8	8	D3492-041	PLUG ASSEMBLY
8	8			D3492-043	PLUG ASSEMBLY
		8	8	D3492-045	PLUG ASSEMBLY
1	1	1	1	D3535-13	WEARSHOE
1	1	1	1	D3535-25	WEARSHOE
1	1	1	1	D3535-35	WEARSHOE
1	1	1	1	D3536-13	GASKET
1	1	1	1	D3536-25	GASKET
1	1	1	1	D3536-35	GASKET
5	5	5	5	D3537-1	WEARPAD
8	8	8	8	D3631-1	WASHER
42	42	42	42	ALS4-1032-225	INSERT (OR ALS7-1032-225, AKS4-1032-225, AELS-1032-225)
38	38	38	38	AN3C5A	BOLT
4	4	4	4	AN3C6A	BOLT
4	4	4	4	AN3C7A	BOLT
4	4	4	4	AN6C44A	BOLT
1	1	1	1	AN8C35A	BOLT
46	46	46	46	AN960C10L	WASHER
2	2	2	2	AN960C816L	WASHER
4	4	4	4	MS21043-6	NUT
1	1	1	1	MS21083C8	NUT
4	4	4	4	NAS1515H3L	WASHER
2	2	2	2	NAS1515H8L	WASHER

E  
E  
E  
E  
E  
E  
E

E  
E

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO 36224

COPYRIGHT © 1998 BY DART AEROSPACE USA, INC.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Monday, 12/10/2007 12:03:30 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 36224

Part Number: D350636012

Job Number:



Seq. #:

Machine Or Operation:

Description :

55.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

08/01/17 (1)

56.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Package as per PPP D350-636-012

Rev F

08/01/17 SP (x1)

57.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

08/01/18 (1)

Job Completion



08/01/17

U

36224



**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: D Date: 08/01/18  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Monday, 12/10/2007 12:03:29 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 36224

Part Number: D350636012

Job Number:



Seq. #:

Machine Or Operation:

Description :

48.0

D2741

Blade



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Blade

Batch: B35435

49.0

AN960C816L

WASHER



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Washer

Batch: M106073 1x M106513 1x CU 8/1/17 (1)

50.0

MS21083C8

NUT



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Nut

Batch: M106431

51.0

AN8C21A

BOLT



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

Bolt

Batch: M105760

52.0

NAS1515H8L

WASHER



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

WASHER

Batch: M105430

53.0

D34931

WASHER



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

WASHER

Batch: B36034

54.0

D35321

spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

spacer

Batch: 33085

CU 8/1/17 (1)

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Monday, 12/10/2007 12:03:29 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 36224

Part Number: D350636012

Job Number:



Seq. #:

Machine Or Operation:

Description :

42.0

MS21083C8

NUT



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

NUT

Batch: m104625

FL

43.0

NAS1515H3L

WASHER



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

WASHER

Batch: m105116

FL

44.0

NAS1515H8L

WASHER



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

WASHER

Batch: m105430

FL

45.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Inspect for Foreign Objects

2-Spray inside of tube with "LPS-3"

batch: m106096

3-Install blade fitting D3488-042, wearshoes and ground handling hardware as per dwg D2750

SIKA FLEX 241

BATCH: m105585

EXP DATE: 08-07

4-Coat all exposed fasteners with "LPS Procyon"

batch: m104251

FL 08/01/15 (1)

46.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

2 08/01/15 (+1)

47.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Monday, 12/10/2007 12:03:29 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 36224

Part Number: D350636012

Job Number:



Seq. #:

Machine Or Operation:

Description :

35.0

AN3C6A

BOLT



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Bolt

Batch: m105057

FL

36.0

AN3C7A

BOLT



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

BOLT

Batch: m105906

FL

37.0

AN6C44A

BOLT



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

BOLT

Batch: m106519

FL

38.0

AN8C35A

BOLT



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

BOLT

Batch: m102671

FL

39.0

AN960C10L

washer



Comment: Qty.: 46.0000 Each(s)/Unit Total : 46.0000 Each(s)

washer

Batch: m106785

FL

40.0

AN960C816L

WASHER



Comment: Qty.: 2.0000 Each(s)/Unit Total : 2.0000 Each(s)

WASHER

Batch: m106513

FL

41.0

MS210436

NUT



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

NUT

Batch: m103693

FL 08/01/15 ①

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Monday, 12/10/2007 12:03:29 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 36224

Part Number: D350636012

Job Number:



Seq. #:

Machine Or Operation:

Description :

28.0

D353635

GASKET



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
GASKET

*B36017*

*FL*

29.0

D35371

WEARPAD



Comment: Qty.: 5.0000 Each(s)/Unit Total : 5.0000 Each(s)  
WEARPAD  
Batch: *B36040*

*FL*

30.0

D36311

WASHER



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)  
WASHER  
Batch: *B34276*

*FL*

31.0

D3488042

BLADE FITTING ASSEMBLY, RH



\* Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)  
Blade Fitting, RH  
Batch: *B26839*

*FL*

32.0

D3492041

PLUG ASSEMBLY



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)  
PLUG ASSEMBLY  
Batch: *B35588*

*FL*

33.0

D3492043

PLUG ASSEMBLY



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)  
PLUG ASSEMBLY  
Batch: *B35840*

*FL*

34.0

AN3C5A

Bolt



Comment: Qty.: 38.0000 Each(s)/Unit Total : 38.0000 Each(s)  
Bolt  
Batch: *m106552*

*FL 08/01/15-10*



**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Monday, 12/10/2007 12:03:29 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 36224

Part Number: D350636012

Job Number:



Seq. #:

Machine Or Operation:

Description :

21.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP  
Inspect Inserts

22.0

D2745

Bushing



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Bushing

Batch: B35688

FL

23.0

D353513

WEARSHOE



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEARSHOE

Batch: B36423

FL

24.0

D353525

WEARSHOE



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEARSHOE

Batch: B36424

FL

25.0

D353535

WEARSHOE



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEARSHOE

Batch: B36194

FL

26.0

D353613

GASKET



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

GASKET

Batch: B35565

FL

27.0

D353625

GASKET



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

GASKET

Batch: B35566

FL 08/01/15 (1)

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Monday, 12/10/2007 12:03:29 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 36224

Part Number: D350636012

Job Number:



Seq. #:

Machine Or Operation:

Description :

8-Grind welds flush as per Dwg D2750

a.m 08-01-07

(1)

9-Spot face ground handling holes section J-J (total of 4 places per side) as per dwg D2750

a.m 08-01-07

(1)

10-Deburr holes

a.m 08-01-07

(1)

14.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

JD 08-01-07

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

JD 08/01/08 (1)

16.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Pressure wash as per QSI 005

08-01-09

(X1)

17.0

POWDER COATING

POWDER COATING



M106379



(1X)

Comment: POWDER COATING

Powder Coat Gloss White (Ref. 4.3.5.1) as per Dart QSI 005 4.3

M-1 08/01/11

18.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

Inspect for foreign object per QSI 024

FL 08/01/15 (1)

19.0

ALS41032225

Insert



Comment: Qty.: 42.0000 Each(s)/Unit Total : 42.0000 Each(s)

Insert

Batch: M100489

FL

20.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Install inserts as per dwg D2750

FL 08/01/15 (1)

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Monday, 12/10/2007 12:03:29 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 36224

Part Number: D350636012

Job Number:



Seq. #:

Machine Or Operation:

Description :

10.0

D34901

CROSS BOLT SPACER



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Crossbolt spacer

Batch:

~~B33824~~ (4)

BE 08/01/08

11.0

D34903

CROSS BOLT SPACER



Comment: Qty.: 4.0000 Each(s)/Unit Total : 4.0000 Each(s)

Crossbolt spacer

Batch:

~~B34309~~ (1)

B33825 (4)

BE 08/01/08

12.0

D2743

Crossbolt Spacer



Comment: Qty.: 8.0000 Each(s)/Unit Total : 8.0000 Each(s)

Crossbolt Spacer

Batch:

B34309 (1)

B36030 (7)

BE 08/01/08

13.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open up holes of Detail V & Detail C to 0.625" (total of 8 holes per side)  
as per dwg D2750.

2-Open up holes of Detail D to 0.750" (total of 4 holes per side)  
as per dwg D2750.

3-Open float holes to .500" (4 per Side)

4-Chamfer holes of Detail V, Detail C, Detail D and hole size "W" per dwg D2750 (welding instructions on sheet 4)

5-Deburr and blow out all chips from inside of tube

6-Prepare tube for welding, remove alodine as required.

6-Bond web D2739 in place as per QSI 015

A/R

Sikaflex-291

batch:

M 105488

exp. date: 3-7-1

7- Weld spacers D3490-1, D3490-3 and D2743 as per dwg D2750 & QSI004  
(welding instructions on sheet 4)

A/R

Aluminum Rod

batch:

M 106330

BE 08/01/08

VR  
8-15

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: / Monday, 12/10/2007 12:03:29 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 350 SKIDTUBE ASSEMBLY RH

Job Number: 36224

Part Number: D350636012

Job Number:



Seq. #:

Machine Or Operation:

Description :

3- Mark fwd end for cutting using Drill Jig DT 8150 & DT8863 and cut as per dwg D2750.

4-Drill pilot holes for Detail B using DT8330

5-Open up holes for Detail B, "hole size W" and blade fitting location holes to 0.500" (total of 9 holes per side) as per dwg D2750.

6-Drill pilot holes for wearplates as per Dwg D2750 using DT8108 and open to 0.297" \*\*\*Make sure that wearplate holes are on bottom of tube\*\*\*\*\*

7-Open up holes of Detail A to 0.250" (total of 2 holes per side)

9-Weld D2744 Cap as per Dwg D2750 and QSI 004 Fill grooves in bend left from bending as per QSI 004.  
A/R Aluminum Rod *M 105138 BE 07-12-17*

10-Grind welds flush as per Dwg D2750 *M 8-1-3*

*M 7-12-17*

5.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

*PD 08-01-03*

6.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

*08/01/03 (+)*

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

*M 8-1-3*

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

*BE 08/01/04*

9.0

D2739

350 I Beam



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Web

Batch: *B 36156*

*(1)*

*M 8-1-5*



W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

2

Date: Monday, 12/10/2007 12:03:29 PM  
 User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : 350 SKIDTUBE ASSEMBLY RH  
 Job Number : 36224  
 Estimate Number : 10265  
 P.O. Number : N/A Part Number : D350636012  
 This Issue : 12/10/2007 S.O. No. : N/A Drawing Number : D2750 REV E  
 Prsht Rev. : NC Project Number : N/A  
 First Issue : N/A Type : LANDING GEAR Drawing Revision : E  
 Previous Run : 36223 Material : N/A  
 Due Date : 1/8/2008 Qty: 1 Um: Each  
 Written By :  
 Checked & Approved By : 07.12.10  
 Comment : Est Rev:I 02-09-25 Rearranged procedure stepsKJ  
 Est Rev:J 06-03-29 As per Rev D EC  
 Est Rev:K 06-07-13 As per dsi9343 EC  
 Est Rev:L 07-07-28 Added SS Wearplates(Rev E) JLM  
 Verified By:EC

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



KS 07.12.10

Comment: DOCUMENT CONTROL

Photocopy blue file and type labels per PPP D350-636-012 CHG 003

08/01/17

2.0 D26003BENT Extrusion Bent



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2600-3-Bent

Extrusion (Bent)

B35527

7-12-17 ①

3.0 D2744 Fwd Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Cap

Batch

B33996

BE 7-12-17

4.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1- Mark cut line on aft end of D2600-3-Bent using Jig DT 8150. Cut to length as per Dwg D2750. Deburr end

2-Drill pilot holes as per Dwg D2750 sheet 3 (D2750-1 details). Drill using drill Jig DT8150 & DT8863 drilling holes labelled "A" only.

7-12-17